



1998 Toxics Release Inventory

VIRGINIA

Reported Releases and Waste Management Activities (in pounds)

	Original Industries	New Industries	Total
On-site Releases	49,477,085	23,199,023	72,676,108
Air Emissions	45,297,883	17,600,284	62,898,167
Surface Water Discharges	2,561,850	2,790,694	5,352,544
Underground Injection Class I Wells	0	0	0
Underground Injection Class II-V Wells	0	0	0
On-site Land Releases to RCRA Subtitle C Landfills	104,229	0	104,229
Other On-site Land Releases	1,513,123	2,808,045	4,321,168
Off-site Releases (Transfers Off-site to Disposal)*	6,944,884	303,894	7,248,778
Total On- and Off-site Releases	56,421,969	23,502,917	79,924,886
Recycled On-site	254,849,274	1,222,160	256,071,434
Recycled Off-site	18,914,718	3,910,459	22,825,177
Energy Recovery On-site	37,236,947	0	37,236,947
Energy Recovery Off-site	7,662,931	1,378,382	9,041,313
Treated On-site	109,085,977	5,967,079	115,053,056
Treated Off-site**	17,193,602	4,564	17,198,166
Quantity Released On- and Off-site***	56,241,714	23,200,105	79,441,819
Total Production-related Waste Managed	501,185,163	35,682,749	536,867,912
Total Non-production-related Waste Managed	22,730	111,944	134,674

Transfers Off-site for Further Waste Management/Disposal

Recycling	18,741,738	3,917,878	22,659,616
Energy Recovery	7,207,244	1,379,737	8,586,981
Treatment	2,619,913	5,925	2,625,838
Publicly Owned Treatment Works (POTWs)	13,968,181	435	13,968,616
Metals and Metal Compounds*	57,514	0	57,514
Non-metal TRI Chemicals**	13,910,667	435	13,911,102
Other Off-site Transfers****	750	0	750
Off-site Transfers to Disposal (not including metals to POTWs)	7,313,733	303,913	7,617,646
Total Transfers Off-site for Further Waste Management/Disposal	49,851,559	5,607,888	55,459,447

* Transfers to POTWs of metals and metal compounds are included in off-site releases. Excludes transfer amounts sent for disposal to other TRI facilities reporting that amount released on-site.

** Transfers to POTWs of non-metals are included in treated off-site waste management activity.

*** Excludes non-production-related releases; e.g. releases due to catastrophic events or remedial actions.

**** Transfers reported without a valid waste management code.

For More Information . . .

State Contact:

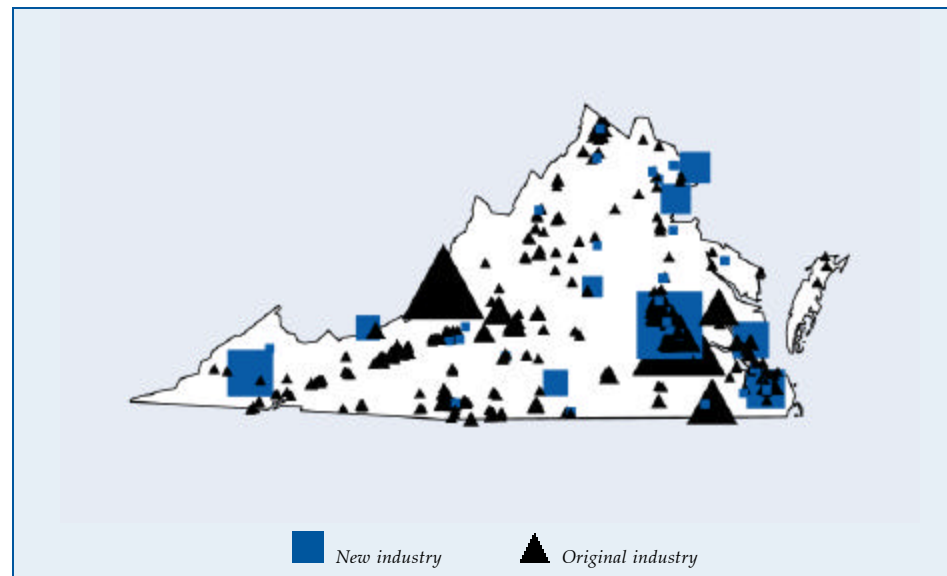
Dona Huang
(804) 698-4489
Fax: (804) 698-4264

EPA Regional Contact:

Bill Reilly
(215) 814-2072
Fax: (215) 814-3114

To obtain TRI data use assistance, call TRI User Support Service (TRI-US):

(202) 260-1531
Fax: (202) 401-2347



The largest marker in the state map represents the largest facility for on-site releases in the state of Virginia. All markers are proportionally-sized to represent the on-site releases at each facility within this state.

State/TRI Data†

Population	6,791,345		
Square Miles	39,598		
Total Facilities	496		
Total Forms	1,822		
Form As	277		
	Original Industries	New Industries	Total
National Rank for Total On- and Off-site Releases*			
Rank	16	28	24
Pounds	56,421,969	23,502,917	79,924,886
National Rank for Total On-site Releases**			
Rank	16	27	24
Pounds	49,477,085	23,199,023	72,676,108
National Rank for Total Releases within State***			
Rank	16	28	24
Pounds	54,909,627	23,360,994	78,270,621
National Rank for Production-related Waste Managed			
Rank	18	30	21
Pounds	501,185,163	35,682,749	536,867,912

* Includes transfers out-of-state for disposal. Excludes transfer amounts sent for disposal to other TRI facilities reporting that amount released on-site.

** Includes amounts released at the facility. Excludes amounts transferred to other sites.

*** Excludes transfers for disposal sent out-of-state or sent to other TRI facilities within the state reporting that amount released on-site.

† One facility, Hopewell Cogeneration Facility in Hopewell, Virginia reported 2.4 million pounds of on-site releases, but has subsequently withdrawn their data submissions. The withdrawal changes the national rank for total on-site releases for new industries from 27 to 28 and for total industries from 24 to 25.



1998 Toxics Release Inventory

VIRGINIA

On-site and Off-site Releases for Top Ten Chemicals Ranked on Total Releases in the State (Original Industries)

CAS Number	Chemical	On-site Releases				Off-site Releases	Total Releases in the State**	Off-site Transfers to Disposal		
		Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection Pounds	On-site Releases to Land Pounds	Transfers Off-site to Disposal* Pounds		Transferred Into State Pounds	Transferred Within State Pounds	Transferred Out of State Pounds
67-56-1	Methanol	12,622,601	71,902	0	18,884	49,266	12,762,653	0	36,006	13,260
7664-41-7	Ammonia	8,033,558	93,176	0	1,805	165,151	8,293,690	180	13,194	151,957
108-88-3	Toluene	4,082,874	975	0	9,773	37	4,093,659	0	37	0
7647-01-0	Hydrochloric acid	3,183,383	0	0	0	3,712	3,187,095	0	0	3,712
7440-66-6	Zinc (fume or dust)	31,563	242	0	39,443	2,587,449	2,658,697	0	2,404,553	182,896
—	Nitrate compounds	4,905	2,272,384	0	0	16,452	2,293,741	0	9,314	7,138
—	Zinc compounds	25,259	21,028	0	672,359	1,476,328	2,194,974	85,305	229,121	1,247,468
78-93-3	Methyl ethyl ketone	2,077,440	678	0	1,918	1,536	2,081,572	434	217	1,319
1330-20-7	Xylene (mixed isomers)	1,818,214	5	0	0	381	1,818,600	29	381	0
75-09-2	Dichloromethane	1,407,953	0	0	0	167	1,408,120	0	163	4

* Excludes amounts transferred to other TRI facilities in the state reporting that amount released on-site.

** The chemical ranking is based on the amounts in this column.

On-site and Off-site Releases for Top Ten Chemicals Ranked on Total Releases in the State (Seven New Industries)

CAS Number	Chemical	On-site Releases				Off-site Releases	Total Releases in the State**	Off-site Transfers to Disposal		
		Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection Pounds	On-site Releases to Land Pounds	Transfers Off-site to Disposal* Pounds		Transferred Into State Pounds	Transferred Within State Pounds	Transferred Out of State Pounds
7647-01-0	Hydrochloric acid	12,355,599	10	0	0	0	12,355,609	0	0	0
7664-93-9	Sulfuric acid [†]	3,305,294	2,400,000	0	0	0	5,705,294	0	0	0
7664-39-3	Hydrogen fluoride	1,421,505	0	0	0	0	1,421,505	0	0	0
—	Barium compounds	2,801	27,194	0	1,276,210	98,287	1,404,492	925	95,779	2,508
—	Manganese compounds	55,675	57,749	0	302,310	1,730	417,464	0	1,730	0
—	Zinc compounds	34,899	9,615	0	304,540	2,650	351,704	1,400	2,650	0
—	Chromium compounds	90,414	283	0	216,710	1,720	309,127	5,430	1,600	120
—	Copper compounds	852	5,621	0	282,860	2,530	291,863	1,950	2,530	0
—	Nickel compounds	43,661	1,389	0	198,010	6,700	249,760	2,150	6,700	0
7440-39-3	Barium	1,255	70,250	0	0	160,000	231,505	0	0	160,000

* Excludes amounts transferred to other TRI facilities in the state reporting that amount released on-site.

** The chemical ranking is based on the amounts in this column.

[†]One facility, Hopewell Cogeneration Facility in Hopewell, Virginia reported 2.4 million pounds of on-site surface water discharges of sulfuric acid, but has subsequently withdrawn their data submissions. The withdrawal does not change the rank of sulfuric acid.



1998 Toxics Release Inventory

VIRGINIA

On- and Off-site Releases for Top Ten Facilities Ranked on Total On-site Releases in the State (Original Industries)

Facility, City, County	On-site Releases						Total On-site Releases* Pounds	Off-site Releases (Transfers Off-site to Disposal)	
	Underground Injection				On-site Releases to Land			Transferred Within State Pounds	Transferred Out of State Pounds
	Air Emissions Pounds	Surface Water Discharges Pounds	Class I Wells Pounds	Class II-V Wells Pounds	RCRA Subtitle C Landfills Pounds	Other On-site Land Releases Pounds			
AlliedSignal Inc. Hopewell Plant, Hopewell, Hopewell City	5,419,387	122,790	0	0	0	0	5,542,177	16,270	0
Westvaco Corp. Bleached Board Div., Covington, Alleghany	4,540,497	73,345	0	0	0	202,439	4,816,281	0	0
Union Camp Corp. Fine Paper, Franklin, Isle of Wight	2,603,614	88,831	0	0	0	0	2,692,445	917,741	0
Stone Container Corp., Hopewell, Hopewell City	2,014,664	0	0	0	0	0	2,014,664	251,530	0
St. Laurent Paper Prods. Corp., West Point, King William	1,681,104	1,849	0	0	0	308,070	1,991,023	0	0
Fibermark Inc., Richmond, Richmond City	1,657,278	0	0	0	0	0	1,657,278	0	0
Philip Morris USA BL/LPF/TQAF Plant, Richmond, Richmond City	1,510,265	0	0	0	0	0	1,510,265	1,700	0
Georgia-Pacific Corp., Big Island, Bedford	1,096,435	17,920	0	0	0	233,170	1,347,525	0	0
Quebecor Printing Richmond Inc., Richmond, Henrico	1,182,436	0	0	0	0	0	1,182,436	0	0
Ford Motor Co. Norfolk Assembly Plant, Norfolk, Norfolk City	1,061,819	0	0	0	0	0	1,061,819	1,254	21,909

*The facility ranking is based on the amounts in this column; these quantities exclude transfers out of state.

On- and Off-site Releases for Top Ten Facilities Ranked on Total On-site Releases in the State (Seven New Industries)[†]

Facility, City, County	On-site Releases						Total On-site Releases* Pounds	Off-site Releases (Transfers Off-site to Disposal)	
	Underground Injection				On-site Releases to Land			Transferred Within State Pounds	Transferred Out of State Pounds
	Air Emissions Pounds	Surface Water Discharges Pounds	Class I Wells Pounds	Class II-V Wells Pounds	RCRA Subtitle C Landfills Pounds	Other On-site Land Releases Pounds			
Chesterfield Power Station, Chester, Chesterfield	3,936,278	18,444	0	0	0	912,000	4,866,722	0	0
American Electric Power, Clinch River Plant, Cleveland, Russell	2,934,168	51	0	0	0	199,245	3,133,464	0	2,861
Chesapeake Energy Center, Chesapeake, Chesapeake City	2,456,601	53,563	0	0	0	0	2,510,164	0	0
Yorktown Power Station, Yorktown, York	2,228,540	10,335	0	0	0	26,100	2,264,975	26,210	0
Pepco Potomac River Generating Station, Alexandria, Alexandria City	1,661,685	172,400	0	0	0	0	1,834,085	0	184,600
Possum Point Power Station, Dumfries, Prince William	1,476,600	6,450	0	0	0	300,000	1,783,050	0	0
Clover Power Station, Clover, Halifax	426,770	3,889	0	0	0	942,000	1,372,659	0	0
Glen Lyn Plant, Glen Lyn, Giles	1,022,386	8,423	0	0	0	265,260	1,296,069	0	8
Bremo Power Station, Bremo Bluff, Fluvanna	826,700	3,091	0	0	0	163,000	992,791	0	0
James River Cogeneration Co. Inc., Hopewell, Hopewell City	160,000	0	0	0	0	0	160,000	0	0

*The facility ranking is based on the amounts in this column; these quantities exclude transfers out of state.

[†]One facility, Hopewell Cogeneration Facility in Hopewell, Virginia reported 2.4 million pounds of total on-site releases, but has subsequently withdrawn their data submissions. The facility has been removed from this list.



1998 Toxics Release Inventory

VIRGINIA

Total Production-related Waste for Top Ten Facilities Ranked on Quantity Released On- and Off-site (Original Industries)

Facility, City, County	Recycled On-site Pounds	Recycled Off-site Pounds	Energy Recovery On-site Pounds	Energy Recovery Off-site Pounds	Treated On-site Pounds	Treated Off-site Pounds	Quantity Released On- and Off-site*	Total Production- related Waste Managed Pounds	Total Non- Production- related Waste Managed Pounds
AlliedSignal Inc. Hopewell Plant, Hopewell, Hopewell City	2,865,790	0	1,671,700	0	3,007,865	699,825	5,556,575	13,801,755	0
Westvaco Corp. Bleached Board Div., Covington, Alleghany	0	0	451,100	0	15,872,900	0	4,833,840	21,157,840	0
Union Camp Corp. Fine Paper, Franklin, Isle of Wight	200,000	0	2,000,120	0	40,970,401	0	3,581,920	46,752,441	0
Roanoke Electric Steel Corp., Roanoke, Roanoke	0	0	0	0	0	0	3,309,592	3,309,592	0
Stone Container Corp., Hopewell, Hopewell City	0	0	8,900	0	0	4,004,000	2,266,816	6,279,716	0
St. Laurent Paper Prods. Corp., West Point, King William	0	0	912,022	0	3,494,684	0	1,988,702	6,395,408	0
Fibermark Inc., Richmond, Richmond City	5,112,215	0	0	1,359	0	0	1,764,909	6,878,483	0
Philip Morris USA BI/LPF/TQAF Plant, Richmond, Richmond City	0	0	0	0	0	26,000	1,511,965	1,537,965	0
Georgia-Pacific Corp., Big Island, Bedford	0	0	0	0	1,528,918	0	1,349,638	2,878,556	0
Quebecor Printing Richmond Inc., Richmond, Henrico	16,551,665	47,994	0	42,798	0	0	1,182,436	17,824,893	0

*The facility ranking is based on the amounts in this column; these quantities exclude non-production-related releases.

Total Production-related Waste for Top Ten Facilities Ranked on Quantity Released On- and Off-site (Seven New Industries)[†]

Facility, City, County	Recycled On-site Pounds	Recycled Off-site Pounds	Energy Recovery On-site Pounds	Energy Recovery Off-site Pounds	Treated On-site Pounds	Treated Off-site Pounds	Quantity Released On- and Off-site*	Total Production- related Waste Managed Pounds	Total Non- Production- related Waste Managed Pounds
Chesterfield Power Station, Chester, Chesterfield	0	0	0	0	0	0	4,863,000	4,863,000	0
American Electric Power, Clinch River Plant, Cleveland, Russell	0	51,700	0	0	450,000	0	3,134,900	3,636,600	0
Chesapeake Energy Center, Chesapeake, Chesapeake City	0	0	0	0	0	0	2,510,100	2,510,100	0
Yorktown Power Station, Yorktown, York	0	0	0	0	0	0	2,265,300	2,265,300	0
Pepco Potomac River Generating Station, Alexandria, Alexandria City	0	0	0	0	60,070	0	2,023,000	2,083,070	1
Possum Point Power Station, Dumfries, Prince William	0	0	0	0	0	0	1,612,000	1,612,000	0
Clover Power Station, Clover, Halifax	0	0	0	0	998,000	0	1,370,900	2,368,900	0
Glen Lyn Plant, Glen Lyn, Giles	0	42,000	0	0	190,000	0	1,298,000	1,530,000	0
Bremo Power Station, Bremo Bluff, Fluvanna	0	0	0	0	0	0	993,000	993,000	0
James River Cogeneration Co. Inc., Hopewell, Hopewell City	0	0	0	0	0	0	160,000	160,000	0

*The facility ranking is based on the amounts in this column; these quantities exclude non-production-related releases.

[†]One facility, Hopewell Cogeneration Facility in Hopewell, Virginia reported 4.8 million pounds of total production-related waste, but has subsequently withdrawn their data submissions. The facility has been removed from this list.